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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,911	08/10/2001	Hasan S. Alkhatib	TTCC-01003US0	5592
28554	7590	06/01/2005	EXAMINER	
VIERRA MAGEN MARCUS HARMON & DENIRO LLP			HABTE, ZEWDU	
685 MARKET STREET, SUITE 540			ART UNIT	
SAN FRANCISCO, CA 94105			PAPER NUMBER	
			2661	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/927,911	ALKHATIB ET AL.	
	Examiner	Art Unit	
	Zewdu Habte	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 9-41, 43-57, 59 and 69 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8, 42 and 58 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date. ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 7, 9-22, 32-34, 36, 37, 38, 40, 43-47, 51, 53, 56, 57, 59-63, 67 and 69 are rejected under 35 U.S.C. 102(b) as being unpatentable by Killian (US 5940394).

As to claims 1, 38, and 54 Killian discloses a remote link adapter herein after RLA 201 as an encapsulator (**an apparatus**) illustrated in Fig. 2 [col. 8, lines 25-29], which includes an interface, a memory and a microprocessor that implement the encapsulation process using the stored program in the memory [col. 9, lines 48-51]:

obtaining a first local address for a destination (**encapsulator 611 includes its own address as a source address**) and a first global address for the destination (**encapsulator 611 includes decapsulator 615's address, as illustrated in Fig. 6**) [col. 5, lines 54-67],

creating a message that includes encapsulation within a single protocol level (**packet 613 includes header 317" and as a payload packet 610, and header 317"** as illustrated in Fig. 5, is formatted as an IP header, which makes packet 613 **within one protocol**), the message includes the first local address and the first global address (**included 610**), and

communicating the message toward the destination (**encapsulated packet 613 is sent to decapsulator 615, see also Fig. 6**) [col. 5, lines 63-67].

As to claims 3, 40 and 56, Killian discloses wherein:

the message includes a first IP packet (**packet 613**), a second IP packet (**packet 610**) encapsulated in the first IP packet (**packet 610 encapsulated in packet 613**) and a third IP packet (**packet 608**) encapsulated in the second IP packet (**packet 608 encapsulated in packet 610, as illustrated in Fig. 6**).

As to claims 4, 41, and 57, Killian discloses wherein:

the first IP packet (**packet 613**) includes the first global address as a first destination address (**decapsulator 615's address**);

the second IP packet (**packet 610**) includes the first global address as a second destination address (**packet 610 as a payload in packet 613, decapsulator 615's address is its second destination**); and

the third IP packet (**packet 608**) includes the first local address as a third destination address (**packet 608 as a payload in packet 613, encapsulator 611's address is its third destination address, see Fig. 6**).

As to claim 7, Killian discloses

the message includes a first IP packet (**packet 613**), a second IP packet encapsulated in the first IP packet (**packet 610**), a third IP packet encapsulated in the second IP packet (**packet 608**) illustrated in Fig. 6; also, Killian discloses that the process of encapsulation or nesting could continue any practical depth (a fourth packet encapsulated in the third packet) [col. 6, lines 4-5].

As to claim 9, Killian discloses receiving the message at an intermediate entity **(decapsulator 615 receives packet 613)**; removing a layer of encapsulation from the message **(decapsulator 615 removes header 317')**; and forwarding the message after the step of removing toward the destination **(decapsulator 615 sends packet 617 to decapsulator 619)**.

As to claim 10, Killian discloses receiving the message at the destination **(decapsulator 619 receives packet 617)**; removing a layer of encapsulation from the message **(decapsulator 619 removes header 317')**; accessing information in the message after the step of removing **(removes outer header 317' to produce packet 621)**[col. 6, lines 1-3].

As to claim 11, Killian discloses providing a pseudo address to an application in the destination based on the message **(after removing the header, dynamically assigning a temporary address)** [claim 4, line 64+].

As to claims 12, 43 and 59, Killian discloses that an encapsulator uses its own address as a source address **(pseudo address** which is a temporally address or a place holder in addressing scheme) after determining packets destined to a particular decapsulator [col. 5, lines 30-31].

As to claims 13, 44 and 60, Killian discloses that a remote link adapter herein after RLA 201 as a decapsulator **(an apparatus)** illustrated in Fig. 2 [col. 8, lines 25-28], which includes an interface, a memory and a microprocessor that implement the encapsulation process using the stored program in the memory [col. 9, lines 48-51]:

receiving a message (**decapsulator 615 receives packet 613**), the message includes encapsulation within a single protocol level (**header 317'' illustrated in Fig. 5 and payload 610 encapsulated as a single IP packet**), the message stores a first global address and a first local address (**packet 610 stored as a payload in packet 613 has header 317'** that includes a source address of encapsulator 609 and destination address of decapsulator 619), the first local address and the first global address correspond to a first entity (**encapsulator 609 and decapsulator 619 are at the border of sub-network 605 as illustrated in Fig. 6**),

removing at least one level of encapsulation from the message, and accessing a remaining level of encapsulation (**decapsulator 615 removes header 317'' to produce packet 617**) [col. 5, lines 65-67].

As to claims 14, 15, 45 and 61, Killian discloses wherein:

the message includes multiple levels of encapsulation after the steps of removing (**after decapsulator 615 removes header 317'' from packet 613, packet 617 shows multiple levels of encapsulation in packet 617, as illustrated in Fig. 6**);

the steps of accessing includes communicating the message toward the first entity using the first global address, the message includes the first local address and the first global address (**decapsulator 615 sends packet 617 according to the address provided in header 317'**); and

the message is in IP packet (**Fig. 5 illustrates IP header 317 format**).

As to claims 16, 17, 46 and 62, Killian discloses wherein:

prior to the step of removing, the message includes a first packet (**packet 613**), a second packet encapsulated in the first packet (**packet 610 encapsulated in packet 613**), a third packet encapsulated in the second packet (**packet 608 encapsulated in packet 610**) and a forth packet encapsulated in the third packet (**the process of encapsulation or nesting could continue to any practical depth; a fourth packet encapsulated in the third packet**) [col. 6, lines 4-5];

the first packet includes the first global address as a first destination (**header 317" includes the address of decapsulator 615 as a destination address**) and a second local address as a first source (**header 317" includes the address of encapsulator 611 as a second local address, as a first source, hence encapsulator provides a temporary source address to identify itself as a local source for a packet traveling through a deferent sub-network, encapsulator 611 adds its own temporary address in sub-network 607 as a source address; explained in claim 4, lines 64+, and col. 5, lines 28-29**), the second local address corresponds to a source entity (**temporary address gets assigned to encapsulator 611 by sub-network 607**) [claim 29, lines 44-51];

the second packet includes the first global address as a second destination (**while packet 610 is encapsulated in packet 613, it sees decapsulator 615 as a second destination**) and a second global address as a second source (**encapsulator 611's temporary address as a second global source since packet 610 and packet 613 belong to different networks**), the second global address corresponds to the source entity (**sub-network 607**);

the third packet includes the first local address as a third destination (**also, Killian discloses that the process of encapsulation or nesting could continue for any practical depth, a fourth packet encapsulated in the third packet**) [col. 6, lines 4-5], and Killian discloses that an encapsulator uses its own address, which is a temporary address as a source address (**pseudo address**) after determining packets destined to a particular decapsulator [col. 5, lines 30-31, claim 4, lines 64+].

As to claims 18 and 19, Killian discloses preparing a response; the response includes the first local address, a second global address, the second global address and the second local address correspond to a source entity, the message is created by the source entity, the response includes a set of encapsulated IP packets; and sending the response toward the source entity (**tunneling can be used wherever the return channel and the forward channel have different namespace**, the illustration in Fig. 6 is used for a response following the same principle used for packet forwarding) [col. 11, lines 1-8].

As to claims 20, 21, 47 and 63, Killian discloses that the message (**packet 305**) includes a pseudo address (**encapsulator 609 adds an outer header 317' to packet 305, and header 317' includes a temporary address as a source address**) [col. 8, lines 53+, and col. 9, lines 1-8, although the description is for Fig. 3-4, the core principle is the same in Fig. 6]; and the step of accessing includes accessing the pseudo address (**decapsulator 619 upon receiving packet 617 removes header 317' in order to obtain packet 305**) [col. 9, lines 20-25].

As to claim 22, Killian discloses that identifying a pseudo address based on the remaining level of encapsulation; and providing the pseudo address to an application at the destination [col. 6, lines 29-36].

As to claims 32-34, 51 and 67, Killian discloses that a remote link adapter herein after RLA 201 as a decapsulator (**an apparatus**) illustrated in Fig. 2 [col. 8, lines 25-28], which includes an interface, a memory and a microprocessor that implement the encapsulation process using the stored program in the memory [col. 9, lines 48-51]:

receiving a message at a destination (**decapsulator 619 receives packet 617**), the message includes a local address (**the address included in the header of packet 305**) and a global address corresponding to the local address (**addresses included in header 317'**), the message is received based on the global address and the local address (**packet 305 is received because of the address in header 317', and header 317' is added at encapsulator 609 to reflect the address in packet 305's header**),

accessing a pseudo address corresponding to the local address and the global address (**encapsulator 609 adds an outer header 317' to packet 305, and header 317' includes a temporary address as a source address that corresponds to the destination address in packet 305**) [col. 8, lines 53+, and col. 9, lines 1-8, although the description is for Fig. 3-4, the core principle is the same in Fig. 6] **decapsulator 619 upon receiving packet 617 removes header 317' in order to obtain packet 305**) [col. 9, lines 20-25], and

using the pseudo address with an application [col. 6, lines 29-36].

As to claims 35, 52 and 68, Killian discloses wherein:

the message includes encapsulation within a single protocol level (**payload 610 is encapsulated as a single IP packet as illustrated IP header 317 format in Fig. 5).**

As to claims 36, 37, 53 and 69, Killian discloses wherein:

removing a layer of encapsulation at the destination (**decapsulator 619 removes header 317' upon receiving packet 617); and**

accessing the pseudo address based on a remaining layer of the encapsulation (**encapsulator 609 adds an outer header 317' to packet 305, and header 317' includes a temporary address as a source address**) [col. 8, lines 53+, and col. 9, lines 1-8, although the description is for Fig. 3-4, the core principle is the same in Fig. 6] **decapsulator 619 upon receiving packet 617 removes header 317' in order to obtain packet 305)** [col. 9, lines 20-25; col. 6, lines 29-36].

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 23-31, 39, 48 - 50, 55 and 64-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Killian in view of Cunningham et al. (US 6888837 B1).

As to claims 2, 23, 39, 48, 55 and 64, Killian discloses a remote link adapter herein after RLA 201 as an encapsulator (**an apparatus**) illustrated in Fig. 2 [col. 8, lines 25-28], which includes an interface, a memory and a microprocessor that

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implement the encapsulation process using the stored program in the memory [col. 9, lines 48-51]:

using a ...to obtain a first local address for a destination (**encapsulator 611 includes its own address as a source address**) and a first global address for the destination (**encapsulator 611 includes decapsulator 615's address as illustrated in Fig. 6**) [col. 5, lines 54-67],

creating a message that includes the first local address, the first global address and a first pseudo address (**encapsulator 609 adds an outer header 317' to packet 305, and header 317' includes a temporary address as a source address**) [col. 8, lines 53+, and col. 9, lines 1-8, although the description is for Fig. 3-4, the core principle is the same in Fig. 6], and

communicating the message toward the destination based on the first local address and the first global address (**encapsulated packet 613 is sent to decapsulator 615, see also Fig. 6**) [col. 5, lines 63-67].

Killian does not specifically disclose obtaining an address based on domain name, but Cunningham teaches an address-translating scheme in a communication network, as illustrated in Figs. 2a – 2d and 9. It would have been obvious to a person of ordinary skill at the time of the invention to combine Killian's packet tunneling through a sub-network with Cunningham's address-translating scheme as illustrated in the mentioned figures above, in order to obtain the destination address, which is taught by Killian from a domain name. The motivation is to identify a destination communication device uniquely in a network.

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As to claims 24, 49 and 65, Killian discloses an apparatus according to claim 64, wherein

receiving the first pseudo address from an application (**encapsulator 609 receives packet 305 from data terminal equipment or DTE 403**), the application uses the first pseudo address to the destination, the step of receiving is performed prior to the step of creating a message (**encapsulated packet is created after receiving packet 305**) [col. 8, lines 53+, and col. 9, lines 1-15].

As to claims 25 and 26, Killian discloses that receiving a second pseudo address, the step of creating a message includes adding the second pseudo address to the message, the destination uses the second pseudo address to reference a source, the step of communicating is performed by the source (**every time an outer header created in a packet the source address is a temporary address associated to the header information in a packet**) [col. 9, lines 9-26].

As to claims 27 and 28, Killian discloses that receiving the first pseudo address, the destination uses the first pseudo address to reference a source, the step of communicating is performed by the source [col. 9, lines 20-26].

As to claims 29, 50 and 66, Killian discloses packet 613 (**a message**) that includes header 317" illustrated in Fig. 5 and payload 610 encapsulated as a single IP packet, (**a single protocol level**) [col. 5, lines 53-67].

As to claims 30 and 31, Killian discloses packet

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receiving the message at an intermediate entity, the first pseudo address is stored in an inner layer of the encapsulation (**decapsulator 615 receives packet 613 and header 317' stored in an inner layer illustrated in Fig. 6**);

removing an outer layer of the encapsulation at the intermediate entity without changing the inner layer of the encapsulation (**decapsulator 615 removes header 317'' from packet 613 without changing packet 610**); and

forwarding the message toward the destination (**decapsulator 615 forward packet 617 that is packet 610 to decapsulator 619, and decapsulator 619 removes see Fig. 6**) [col. 9, lines 20-26].

Allowable Subject Matter

5. Claims 5, 6, 8, 42 and 58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zewdu Habte whose telephone number is 571-272-3115. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on 571-272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

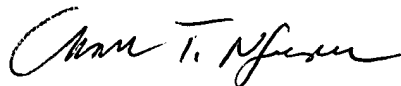
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Zewdu Habte (Zed)
Examiner
Art Unit 2661

ZH

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May 25, 2005



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600